

first four joints with much black above; mesothorax black, with two red marks; varying to red with a broad black median band; scutellum red, prominent; postscutellum black marked with red, or red; metathorax black, with two red spots in the enclosure; legs red, the femora more or less blackened basally; wings strongly dusky at apex; stigma ferruginous, nervures ferruginous to fuscous. I first received a specimen (Lehigh Gap) from Mr. Viereck, and placed it as a variety of *N. perplexa*. A second example (Ithaca) appears to show that it is a distinct species, not very close to *perplexa*. In my table of *Gnathias* (Proc. Phila. Acad., 1903, p. 595) it runs to *N. physura* Ckll., from Nevada. It is in all respects very close to *physura*, but a little larger, with different lateral face-marks, and with the apical plate of abdomen strongly notched. It is possible that it is a variety of *N. bella*, in which the male has taken on much of the female coloration. The b. n., as usual in *Gnathias*, goes a long distance basad of the t. m.; the second s. m. is ordinary. The venter of the abdomen is red suffused with black; the base of the first dorsal segment is black. The pleura is marked with red, varying to nearly all red.

Ithaca, New York (Nathan Banks); Lehigh Gap, Pa., June 26 (Viereck). The darker specimen, from Ithaca, is taken as the type.

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**ADDITIONS TO THE LIST OF NORTH AMERICAN  
GEOMETRIDÆ, WITH NOTES ON SOME  
DESCRIBED SPECIES.**

[Lepidoptera.]

By JOHN A. GROSSBECK.

The following embraces some of the species contained in an interesting lot of Geometridæ received from Dr. Harrison G. Dyar for identification. In the case of *Euphenolia pallimedia*, n. sp., the main material came to me from Dr. Henry Skinner, of the Academy of Natural Sciences, Philadelphia, some time previous to the receipt of the specimens from the National Museum. Most of the material came originally from Dr. William Barnes, but all the types, except a few which are retained in the author's collection, have been deposited in the National Museum.

**Hydriomena manzanita** Taylor.

Two specimens labelled Middle California. They are rather abraded and the ornamentation is so obscure that a different species is suggested; but a comparison with fresh examples

of *manzanita* in structure, color, and such markings as can be made out fails absolutely to separate them. The species has not been hitherto recorded off the Island of Vancouver, so the present specimens considerably extend its known range.

### **Cœnocalpe carnata** Pack.

Two males from Middle California. Both of these agree more nearly with Packard's description of the species than anything I have seen, and additional material may show that the species generally passing in collections as *carnata* is distinct from it. Of the latter form I possess a series of 30 specimens from Stockton, Utah, and Fort Wingate, New Mexico, and none of them shows so clearly the bright carneous cross-bands, the outer of which contains a series of black venular dots.

### **Euphenolia pallimedia**, n. sp.

Expanse, 13-14 mm. Front, vertex, except anterior portion, palpi, thorax, and abdomen reddish-brown; antennæ and anterior part of vertex pale yellow. Wings pale yellow, basal portion of primaries reddish-brown, the outer edge of which is oblique, extending from middle of costa or beyond, where it is more or less diffuse, to quite far in on inner margin. Outer third of wing crossed by a sinuous fascia of reddish-brown, broad on costa and becoming narrower toward inner margin, and bounded internally by the extradiscal line which is of a slightly deeper shade. A small portion of outer area not taken up by this fascia is of a deeper yellow than the center of the wing and the fringe is concolorous with it. Secondaries with outer third occupied by a broad band of reddish-brown, limited internally by the sinuous extradiscal line which can scarcely be separated from it, and externally by the bases of the yellow fringe. Sometimes a broken line of ground color runs through the band near its outer edge. Discal points on both wings small, occasionally absent. Beneath, as above, but the reddish-brown color a little fainter, especially that at the base of the primaries, and the extradiscal lines are more prominent in consequence.

*Habitat*.—Carr Canyon, Huachuca Mts., Cochise Co., Arizona, in August (Skinner); Wilgus, Cochise Co., Arizona (Barnes).

*Types*.—Male and female in the Academy of Natural Sciences, Philadelphia; co-types in the U. S. National Museum (No. 11872), in Rutgers College, and in my own collection.

A not distant relative of *Euphenolia skinnerata* Gross., with the same general type of maculation; but the color of the ornamentation is quite different in *pallimedia* and the cross-

lines are not nearly so well differentiated from the bordering shades as in *skinnerata*.

### **Cymatophora tenebrosata** Hulst.

One male and 3 females, Huachuca Mts., Arizona, and Glenwood Springs, Colo. One specimen without locality, labelled June 8-15.

The species was originally described from 5 examples of each sex from various collections, but only a single type is now in the Hulst collection at New Brunswick. The specimens before me show considerable variation, ranging from a whitish-gray ground with a single cross-line, the extradiscal, to a ferruginous-gray ground with three distinct cross-lines.

### **Enypia griseata**, n. sp.

Expanse, 30 mm. Head gray, at base of antennæ superiorly, white; upper portion of front brown, divided in the middle; thorax with mixed gray and white scales; abdomen wholly whitish. Primaries leaden gray over a whitish background, crossed by two narrow, scalloped, blackish lines, most distinct on the veins. Intradiscal line situated one-fourth out from base and consisting of four outward scallops; as a whole it is scarcely outcurved after the first bend from costa. Extradiscal line originating on costa about one-sixth in from apex and extending obliquely across the wing to the inner margin, ending one-third in from the anal angle; it consists of a series of inward scallops, those between veins  $M_1$  and  $M_3$  and between the anal vein and  $Cu_2$  being larger than the others and projecting farther inward. Discal spot absent. Fringe checkered with blackish at the termination of the veins. Secondaries whiter than primaries, especially on basal two-thirds, and crossed by a single, inwardly-scalloped line, vaguely indicated except on the veins and at inner margin. Fringe whitish, marked at ends of veins by a distinct blackish spot. No discal spots. Beneath whitish, powdered with grayish on costal two-thirds of primaries and sparsely on costal and outer regions of secondaries. Extradiscal line showing faintly on fore wings. Fringe as above.

Described from 1 male.

*Habitat*.—Las Vegas Hot Springs, New Mexico (Schwarz & Barber).

*Type*.—No. 11873, U. S. National Museum.

This neat little species is allied to *Enypia packardata* Taylor. It differs markedly, however, from that species in that the gray scales which overlie the wings are evenly distributed and not formed into transverse striations as in *packardata*. The cross-lines, also, are narrower, not so deeply scalloped, and there is no indication of a discal spot on any of the wings.

The genus *Enypia* was erected by Hulst with *venata* Grt. as its type and is diagnosed as possessing a hair pencil on the hind tibia of the male. In *griseata* this character could not be found and an examination of the type species shows that it, too, is destitute of this structure, as are the remaining two species, *perangulata* and *packardata*.

#### **Meris alticola** Hulst.

Two males from Las Vegas, New Mexico, without date. The genus and species were described by Doctor Hulst from a single female (Trans. Am. Ent. Soc., xxiii, p. 348) and until now the male had not been discovered. I append a description of the male structure to supplement that of the female in the above mentioned publication.

Palpi short, porrect; tongue developed; antennæ bipectinate, the pectinations clavate and gradually growing shorter to a simple apex; patagia long haired; abdomen untufted; posterior femora fringed with long hair, posterior tibiæ scarcely swollen, with all spurs, grooved, but destitute of hair pencil. Venation as in the female.

#### **Therina hyalinaria**, n. sp.

Expanse, male 20 mm.; female 35 mm. Head, palpi and anterior part of thorax pale yellow; posterior part of thorax and abdomen whitish. Both wings translucent; above and below uniformly whitish save for a faint yellowish tinge along costæ in male.

Described from 1 male and 1 female.

*Habitat*.—Southern Arizona (Poling).

This is a typical *Therina* and at once distinguished from its congeners by the perfectly immaculate wings.

*Type*.—No. 11874, U. S. National Museum.

#### **Gonodontis subcineraria**, n. sp.

Expanse, 28-30 mm. Head whitish or brownish, sometimes the front brown and the space between the antennæ whitish, becoming darker toward posterior edge of vertex. Thorax and abdomen brownish-cinereous. Ground color of wings soiled-whitish, heavily overlaid with brownish scales which take the form of transverse dashes closely arranged, and, with the ground color, give the wings a mottled brownish-cinereous appearance. In the female these dashes are not so pronounced, but there is a liberal scattering of dark-brown atoms, which are fewer in number in the male, over the wings. Primaries with two rather narrow cross-lines of the same general color as the brownish blotches; these are indefinite in two of the specimens at hand, but quite distinct in one male. The intradiscal line begins one-fourth out on the costa and extends outward toward center of wing to the

cubital vein, being slightly angled on the radial vein; from cubitus it bends inward and runs obliquely with a gentle inward curve to inner margin. The extradiscal line begins one-fourth in from apex, extends outward in a straight line nearly to  $M_1$ , then bends sharply inward, forming a right angle to the first part and runs in an almost straight line to inner margin. The two lines divide the inner edge into three equal parts. Discal spot brown, distinct, not very large. Secondaries with a single, outwardly curved median line extending from inner edge two-thirds across the wing, being scarcely traceable in the female. Discal spot absent. Beneath soiled-whitish, with a faint yellowish cast, the transverse dashes of above heavily reproduced, especially on primaries and more profuse on outer third of both wings. Small discal spots on both wings.

Described from 2 males and 1 female.

*Habitat*.—Southern Arizona (Poling).

*Type*.—No. 11875, U. S. National Museum.

This species falls in that section of *Gonodontis* which contains *distycharia* Gn. and *antidiscaria* Walk. and is in fact nearly related to the former. Like *distycharia* it appears subject to considerable variation, but may be readily separated by the mottled wings and the absence of a pale yellow edging with which both lines of *distycharia* are bordered.

### **Sabulodes amplicineraria** Pears.

Three males, Southern Utah (Poling). In the absence of a male the species was tentatively referred to *Sabulodes* by Mr. Pearsall. Males now in hand show the reference to be correct. Examples were taken not uncommonly during the season of 1907 by Mr. Tom Spalding at Stockton, Utah, in June, August, and September.

### **Sabulodes ligata**, n. sp.

Expanse, 33-37 mm. Head, thorax, and abdomen ochreous white. Wings concolorous, well scattered over with blackish atoms, slightly transverse in position, and with faint transverse buff colored dashes, most evident on primaries between the two cross-lines. Intradiscal line of primaries one-third to one-fourth out from base, brown or ochreous in color and edged internally by a clear line of ground color; it extends a little inwardly obliquely, scarcely curved, but angled outwardly on anal and cubital veins; costally this line is obsolete. Extradiscal line of same color as intradiscal and bordered with a band of ground color externally; it begins narrowly on costa less than 4 mm. in from apex, curves inward a short distance below origin, and extends straight or slightly outcurved to inner margin, ending over one-third in from anal angle. Discal spot moderate in size, brown. Secondaries

with a single median line, continuous to and concolorous with the extradiscal line of fore wings. Discal spot moderate in size, brown. Beneath pale creamy yellow, with a scattering of brown atoms and with the cross-lines of above feebly reflected. Discal spots present.

Described from 2 males.

*Habitat*.—Huachuca Mts., Arizona, in June.

*Type*.—No. 11876, U. S. National Museum.

The above describes more particularly the specimen I have made type; in the co-type the cross-lines are brown instead of ochreous, the intradiscal line of primaries is located nearer the discal spot, and the angles on the veins are scarcely obvious, while the extradiscal line of both wings is a little outcurved. There is no doubt, however, but that they are one species, as similar differences occur throughout the group to which it belongs.

Superficially the species resembles some of the paler varieties of *Caberodes confusaria* Guen., but the angulated or almost straight intradiscal line immediately separates it from that species. It is, furthermore, a typical *Sabulodes* with simple, flattened antennæ in the male.

#### *Sabulodes dyari*, n. sp.

Expanse, 32 mm. Front and palpi reddish-brown; vertex, antennæ, thorax, and abdomen yellowish. Wings yellowish, with a deep-orange cast, especially outwardly, and sparsely sprinkled over with minute, blackish atoms. Two orange-colored lines of a medium breadth cross the primaries, the intradiscal and extradiscal. The first of these begins at the radial vein one-third out from base and extends in an almost straight line to inner margin, being directed slightly outward; the second begins very faintly on costa one-fourth in from apex and extends obliquely inward and without curve, except an almost imperceptible one just below costa, to inner edge, the distance between them near the costa about twice as great as that on the inner margin. Subterminal line absent; fringe orange. Discal spot brown, distinct, not large. Secondaries with a single slightly curved line traversing the center of the wing from inner margin to radial vein, where it ceases abruptly. Discal spot small, faint, just within cross-line. Beneath, both wings pale creamy-yellowish, darker on anterior two-thirds of primaries and sparsely sprinkled over with brown atoms; discal spots small, distinct. No indication of cross-lines.

Described from 1 male.

*Habitat*.—Huachuca Mts., Ariz., July 24–30.

*Type*.—No. 11877, U. S. National Museum.

Nearest to *Sabulodes novellata* Hulst, but the apex and angulation of primaries on vein  $M_1$  are very much less acute

than in that species and the intradiscal line is straighter, approaching the extradiscal toward inner margin. The deep orange-yellow shade of the ground in *dyari* is probably never attained by *novellata*.

### **Destutia**, n. gen.

Palpi short, porrect, projecting a little beyond the front; tongue developed; front rounded, slightly produced, smooth; antennæ of male simple, naked, flattened; thorax and abdomen untufted; posterior tibia of male thickened but without hair pencil, with two pairs of spurs; fore wings obtusely angled at  $M_3$ , apex acute, falcate, twelve veins, two accessory cells,  $R_2$  from end of cell,  $R_3$  and  $R_4$  stemmed,  $R_4$  from cell,  $M_1$  from near base of second cell; hind wings with seven veins, subcosta separate from radius, radius not stalked with  $M_1$ .

This genus is allied to *Sabulodes* Guen., differing chiefly in the absence of the hair pencil on the hind tibia.

*Type*.—*D. novata* Gross.

### **Destutia novata**, n. sp.

Expanse, 35-40 mm. Head, thorax, abdomen, and wings above ochreous, the posterior wings somewhat paler than the anterior ones, both wings more or less finely mottled by darker shadings of the same general color. Two purplish-brown lines of moderate breadth cross the primaries; the intradiscal one-fourth out from the base is shortly outcurved from costa, then runs almost straight to inner margin; the extradiscal line leaves the costa 3 or 4 mm. from the apex (according to size of moth), curves gently outward a short distance, then faintly inwardly obliquely to inner edge. The two lines divide the inner margin into three almost equal parts. The extradiscal line in one specimen is edged externally by a narrow, incomplete, white line which shows plainest near the costa and on the veins. Secondaries with a single extradiscal line, continuous to that of the fore wings, obsolete at costa, slightly out and incurved, and ending a little outward of the center of the inner margin. A brownish discal spot on both wings, that of primaries being largest. Beneath somewhat paler than above, sparsely brown speckled, especially along the costæ. Discal spots present, prominent. Transverse lines of above showing rather strongly on primaries, much less so on secondaries.

Described from 2 males.

*Habitat*.—Huachuca Mts., Arizona, May 8-15.

*Type*.—No. 11878, U. S. National Museum.

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